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Notice of Allowability	Application No.	Applicant(s)	
	09/937,875	MIN ET AL.	
	Examiner Carl H. Layno <i>5/31/05</i>	Art Unit	
		3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Paper No. 10012002.
2. ☒ The allowed claim(s) is/are 7-12.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>1/30/02</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

1. Acknowledgment is made of applicant's preliminary amendment, which was received by the Office on October 1, 2002.

2. Claims 1-6 are canceled. Claims 7-12 are active.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

4. Acknowledgment is made of applicant's Information Disclosure Statement (PTO-1449) which was received by the Office on January 30, 2002.

Drawings

5. The corrections to the formal drawing of Figs. 1 and 2 were received on October 1, 2002. These drawing changes are approved by the Examiner.

Allowable Subject Matter

6. Claims 7-12 are allowed.

Examiner's Comments

7. The formal drawings should be modified to incorporate the corrections to Fig. 1 submitted by the Applicant in the paper received by the Office on October 1, 2002.

Reasons for Allowance

8. The following is an examiner's statement of reasons for allowance:

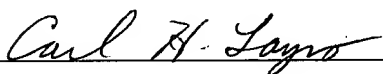
Independent claim 7 describes the details of a rate adaptive pacemaker including, among other features, a "pacing rate limiter" circuit for calculating stroke volume (SV) of a patient when active and when at rest (SV_{rest}). These parameters determine a ratio (SV/SV_{rest}), whose value has been specified in the claim to be between 1.2 and 1.5, and whose corresponding cardiac output (CO) is greater than that at rest (CO_{rest}). These criteria are used to form a lower limit to the pacer's pacing rate.

Of the prior art references of record, only the Schroepel '592 patent, cited herein by the Examiner, appears to detect stroke volume and compare it against a predetermined value (see Fig. 6) in the manner described by the applicant. Unlike applicant's claims, however, the stroke volume calculation of Schroepel does not involve calculating a stroke volume ratio based upon the patient's resting stroke volume. Similarly, the Examiner could not find any other reference(s) showing or teaching the feature of a stroke volume ratio based upon a patient's resting stroke volume; consequently, the Examiner deems this claim and its depending claims to be allowable over the prior art of record.

All claims having been allowed, **corrected formal drawings are now required.**

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

A handwritten signature in cursive script, reading "Carl H. Layno", is written over a horizontal line.

CARL LAYNO
PRIMARY EXAMINER

CHL
5/31/2005